THANK YOU

2016 ANNUAL CONFERENCE SPONSORS!

PLATINUM

LONGWOOD GARDENS
RBI ROUGH BROTHERS, INC. CONSERVATORIES

GOLD

BARTLETT TREE EXPERTS
THE JERUSALEM BOTANICAL GARDENS
American Public Gardens Association
Board of Directors

SILVER

BHS
McCuba Center
chanticleer
PHIPPS
Bayce Thompson Arboretum
FIU Arts, Sciences & Education
Lake|Flato
School of Environment, Arts and Society

BRONZE

The Longwood Graduate Program in Public Horticulture
LONGWOOD GARDENS
UNIVERSITY OF DELAWARE
The Reiman Gardens
IOWA STATE UNIVERSITY

SUPPORTERS

Greater Des Moines Botanical Garden
GUEST EXPERIENCE MANAGEMENT SERVICES
UC Davis
Arboretum and Public Garden
BALDWIN

LEICHTAG COMMONS

GrowIt! GARDEN SOCIALLY
THE HUNTINGTON
Enriching lives through knowledge since 1905
The Rough tradition of excellence continues with The Sibley Center at Callaway Gardens.
Since 1932 Rough has been building and maintaining large, high-quality glazed structures, including:
- arboretums
- botanical gardens
- conservatories
We have the experience, resources, and technical expertise to solve your design needs. For more information about Rough Brothers’ products and services, call 1-800-543-7351, or visit our website: www.roughbros.com

Creating Landscapes that Teach, Inspire and Succeed.

As we celebrate our ten-year milestone, Terra Design Studios remains unwavering in our dedication to create landscapes that teach, inspire and succeed.

Yet we have not journeyed through the last decade alone. You, our colleagues and friends, have offered your wisdom, strength and passion every step of the way, and for that, we thank you!

We eagerly look towards the future, and hope you will continue to join us for the ride!

Cindy Tyler, Principal

www.terradesignstudios.com

GROWING CONFIDENCE
MANAGING RISK

CELEBRATING 10 YEARS!

bhs

INSURANCE AND RISK MANAGEMENT FOR PUBLIC GARDENS
Preferred Partner since 2000

Sharon Van Loon, CPCU
svanloon@bhsins.com
Kim Slager CRM, CIC
kslager@bhsins.com
1.800.350.7676 • bhsins.com
Is your greenhouse protected?

New and Improved ACRYLITE® High Impact Acrylic glazing now provides twice the protection for your valuable greenhouse crops.

For decades, leading growers have relied on the strength and weatherability of ACRYLITE® high impact acrylic multi-skin sheets to provide long-term growth results. Now, with double the impact strength of our previous generation, our new, more robust acrylic sheet provides even more protection from hail. You can now expect even higher performance and protection from the industry’s most weatherable greenhouse covering.

Backed by our new and improved 30-year non-yellowing & 10-year non-prorated hail & light transmission warranty, building new or recovering with ACRYLITE® high impact acrylic is a choice you’ll be glad you made for decades to come.

Test it for yourself. Call us at 905-984-1598 or visit acrylitebuildingproducts.com and we’ll ship you samples of our new products free of charge.

Available spring of 2016.
FOCAL POINTS

6  Disaster Preparedness: A Necessity Today More than Ever
   Taking the time today to develop responses to disasters will pay off in quick and effective action later. Be prepared!

7  Disaster Recovery Planning: An IT Perspective
   Floods, power outages, hackers, and more can wreak havoc on your technological services unless you have an IT disaster recovery plan in place. Learn how to create one.

8  Ready for the Next Hurricane?
   After Hurricane Andrew ravaged Montgomery Botanical Center in 1992, a response plan was developed. Katrina in 2005 tested that plan and led to refinements before Wilma struck two months later.

10 Event Security for Mass Gatherings: The New Normal
   As recent, tragic events have shown, public venues are vulnerable to attack. Government agencies can assist you in preparing for the previously unimaginable.

12 Disaster Preparedness: Protecting and Preserving Your Living Collections
   Originally presented at the Plant Symposium held in September 2014, this downloadable poster urges you to know your risk, know your collection, and prepare and respond.

26 Miami 2016 Highlights
   We met in Miami to Change Perspectives and Plant for The Future. Here are some highlights of that memorable conference.

BACKBONES

18  Learning in the Garden: Training Grounds

20  Learning in the Garden: The 300Gardens Project

PERENNIALS

5  Director’s Note

14  Nationally Accredited Plant Collection™ Showcase

16  Photosynthesis

22  Garden Exhibit

24  Things We Love This Summer

25  How Does Your Garden Grow?

28  Garden Professional Spotlight
Seek the uncommon in the common. Consider the ubiquitous zinnia. A staple of summer arrangements and a sought-after annual for any sunny corner needing an explosion of color, it has, for some, earned its Mexican name mal de ojos (“evil-eye”). But a close look repays the curious eye handsomely. This open-pollinated progeny of Benary’s Giant Mix’ reveals unanticipated complexity.

© Carlo A. Balistrieri
(See Photosynthesis, pages 16-17, for more about Carlo and his work.)
One of the most provocative moments for me at the 2016 American Public Gardens Association Annual Conference (my seventh) was when an attendee confessed in a session Q&A, "I'm feeling anxious just being here; my garden is growing as we speak and I'm the person that needs to be back there weeding."

This person made the important decision to step away for a few days to invest in their professional growth, at the expense of these day-to-day demands. Time and again during the Conference, I ran into other colleagues who have found it immensely valuable to step out of their normal zone in order to grow—whether by attending a conference, symposium, or workshop, reading a white paper or an issue of *Public Garden*. They have taken lessons learned back to their individual gardens, which have benefitted.

*Public Garden* is a valuable benefit of your Association membership. If you merely skim it, looking only for those topics that have relevance to your current job...you’re not taking full advantage of what the magazine has to offer. I challenge you to select an article in this issue that has nothing to do with your current responsibilities, and read it. Stretch yourself.

The American Public Gardens Association is also stretching and growing as we work to implement the 2015-2020 Strategic Plan. I am, too, as I take on the role of Director, External Relations. I am dedicated to ensuring that our global message to “connect, preserve and champion” public gardens is strong and vibrant; that each member derives deep value from their association with us; and that we grow our philanthropic partners, relationships, and resources to make our vision a reality.

As I transition from being a garden development director to my new role serving over nine-thousand Association members, I look forward to learning more about all the great work each of you are doing.

Let’s grow together.

Joan Thomas, CFRE

*Director, External Relations*

*American Public Gardens Association*
It isn’t a comforting or likable subject, but disaster and emergency planning has emerged as a necessary component of public garden management. Whether we face risks from changing or erratic weather, seismic events, wildfire, infrastructure failure, or even civil disobedience and political unrest, thinking through threatening scenarios and developing written disaster management plans can help equip your organization to survive and even transcend unfortunate circumstances.

The recommendations and examples provided in these articles cover a wide variety of threats, considerations and action planning that could be applied to many public gardens, but it is important that individual gardens take the time to think through and write out plans that pertain specifically to their operations. Public gardens vary widely in geography, operations, management, support and potential threats, so developing and regularly reviewing a tailor-made disaster preparedness plan for your organization is the best course of action. Many government agencies, insurance carriers, and organizations have guidelines and templates available so that public gardens can put together their own plans. It can take some time to gather the necessary thoughts and resources to create an effective disaster plan, but the effort is well worthwhile and is best accomplished before problems arise. Should you get caught without an effective disaster plan, then the lessons learned from an unfortunate event can also help build the framework for a plan.

Having a robust and well-reviewed disaster management plan can help your garden to weather the storms of the future. Though the topic may be uncomfortable at times, it can also bring peace of mind and inspire purposeful action in the face of potential chaos.

photo: Several inches of water filled basement offices in the Research and Administration Building at The Morton Arboretum after the flood of 2013.
© 2016 The Morton Arboretum

Melanie Sifton is Vice President of Horticulture and Facilities at Brooklyn Botanic Garden. She may be reached at melaniesifton@bbg.org.
These days, it is difficult to separate a garden’s daily operations from technology. Everything from time clocks to email and donor management to point-of-sale can be impacted if your information technology (IT) systems go down. Business continuity—the ability to keep your garden up and running with a minimal amount of interruption—is highly dependent on having an IT disaster recovery plan in place.

Creating an IT disaster recovery plan should be part of a garden-wide conversation about priorities and capacity. “Look at what you can afford both in terms of loss and support,” says Derek Schartung, IT Systems Administrator at Cheekwood Botanical Garden and Museum of Art in Nashville, Tennessee. “What are your mission-critical systems? What is the longest you can live without them?” Working with garden leadership, determine acceptable downtime and put systems into place—either using internal resources or leveraging vendors’ service level agreements—to ensure that your disaster response will meet those minimum requirements.

While many of the recovery strategies will be the same, to help you plan smart, efficient responses, you should consider different types of natural disasters (fire, flood, tornado, earthquake, etc.—even if rare in your region), as well as denial of service attacks (a type of cybercrime). “Try to think through all the different scenarios, even if the possibility of one or more of them ever occurring is remote,” says Shaun McPhearson, IT Manager at The Morton Arboretum in Lisle, Illinois. “The flood of 2013 helped us think about how much we can do from off-site if the arboretum becomes inaccessible during a disaster.”

Responding to disasters—regardless of what form they take—comes down to two key principles: redundancy and dispersal. It is important to keep multiple copies (redundancy) of data, software, and servers in different physical locations (dispersal). Cheekwood, for example, put their disaster recovery plan into place in phases, starting in 2010 after Nashville was hit by a flood. The first phase took care of redundancy and dispersal by backing up servers and data on site, and then physically moving those backups off campus. The second phase, put into place in 2014, uses virtualization to maintain data and applications off site, while still providing continual on-site and remote access.

Fortunately, IT services are no longer necessarily tied to a physical location; cloud-based software and storage can provide ubiquitous access to your garden’s business applications. These innovations can benefit gardens without a lot of in-house technology capacity as well as gardens with more robust IT infrastructures. According to McPhearson, The Arboretum’s transition to Google for Work and other mobile desktop applications has been key to implementing its disaster recovery strategy.

After implementing a disaster recovery plan, your work is still not done. In addition to engaging in regular, proactive monitoring and maintenance of your IT systems, you should review the plan and the technologies on which it relies every five to ten years. Make sure to keep leadership involved so that the plan has ongoing financial support for maintenance and upgrades.

If you do it right, implementing a disaster recovery plan won’t be visible to the majority of your garden staff. “The best impact is no impact,” says McPhearson. “All of the good stuff happens behind the scenes.”

photo: Roads and underpasses at The Morton Arboretum were rendered impassable when the area was hit by flooding in April 2013.

© 2016 The Morton Arboretum

Carissa Kowalski Dougherty is the Head of Knowledge Management at The Morton Arboretum. She may be reached at cdougherty@mortonarb.org.

DISASTER RECOVERY PLANNING: AN IT PERSPECTIVE

Carissa Kowalski Dougherty
READY FOR THE NEXT HURRICANE?

HORRIBLE WEATHER IS RARE IN SOUTH FLORIDA. BUT WHEN IT COMES, IT CAN BE CATASTROPHIC.

GEOGRAPHY. Stretched between the balmy waters of the Atlantic and the Gulf of Mexico, and pointed at the Caribbean, South Florida draws some great visitors—remember the Miami conference? But our geography can also attract occasional unwelcome guests—hurricanes that thrive on the hot, humid air and warm seas characteristic of our summer rainy season.

HISTORY. Hurricane Andrew in 1992 set back every garden in Miami. Montgomery Botanical Center’s Master Plan was also developed that year—the tabula rasa Andrew left behind strongly motivated us to fulfill that new vision. But 2005 was the year that broke records—most named storms (twenty-eight), most hurricanes (fifteen), costliest storm ever (Katrina), and strongest Atlantic Hurricane measured (Wilma). That crucible forged our preparedness standards.

READINESS. Before storm season, three areas need special attention:

Team - We assign each person to a “Prep Team” responsible for assigned facilities and collections preparation. Contact info is updated, and a phone tree distributed.

Collections - While trees cannot be shielded from severe weather, good arboriculture throughout the year reduces wind load. This is reviewed carefully in the early summer, before the peak of storm season. We double and triple label our Nursery collections—and bury a tag in the container.

Facilities - We inspect and test shutters and generators before storm season.

PREPARATION. When a storm is on the way:

Team - Forecasts are watched carefully and communicated thoroughly to everyone. Reminders about safety are kept in focus. Tasks and closures are scheduled to also allow the team to prepare their homes and families.

Collections - Nursery plants are moved under glass and between structures as space allows. Containers are pushed close together to brace each other.

Facilities - Tasks are ordered by labor required: quick tasks (e.g., roll-down shutters) are done first, escalating to more difficult tasks (bolt-on storm panels) if the forecast warrants them. Thus, if the threat diminishes, stowing the preparations is faster.
RESPONSE. After a hurricane:

**Team** - Communication is increased. The phone tree brings the team on site when conditions become safe. Coordination meetings are doubled and expedited—all staff assemble at daybreak and again after lunch to ensure cohesion and clarity. Strict safety reminders are emphasized; it is often said that the clean-up phase is the most hazardous part of a hurricane.

**Collections** - Restoration begins with assessment and initial triage to find the most vulnerable and salvageable plants. Debris clearing and plant rehabilitation then proceed in parallel as safety conditions allow.

**Facilities** - Safety inspection proceeds first, followed by generators and needed repairs.

LEARNING. Katrina (August 25) and Wilma (October 25) hit Miami exactly two months apart. This created an opportunity to develop better readiness and responses. Our long-standing, robust, systematic response protocol required detailed assessment before starting rehabilitation work. While that method was perfectly suited for prior, less destructive storms, the scale of Katrina’s damage turned that assessment into a days-long process, imperiling vulnerable collections. The team modified those methods prior to Wilma, to allow a shorter initial assessment, followed by parallel walkthrough and rehabilitation. If I may update the Scout Motto: “Be Prepared, But Be Flexible.”

DISCOVERY. We cherish our plant collections so systematic assessments were critical to see how those plants were affected, and detailed notes were retained. While it was painful to lose 10 percent of our collection that year, those notes led to some interesting science. Through careful statistics, we now know that Caribbean palms are all highly evolved to resist strong winds, while South American palms are more variable—a finding that makes perfect sense when you view the geography of hurricane tracks.

ADVICE. Disasters affect people. A wise man once said, “Take care of the mission, and take care of the team.” Getting the garden back in shape is critical, but so are patience and consideration—and nothing is more important than safety. Careful readiness; efficient, well-scheduled preparation; and safe response work give the team time to do the same at home.

FINALLY: Have a way to make coffee for the team, especially if the grid is down for a full month.

---

M. Patrick Griffith is Executive Director of Montgomery Botanical Center in Coral Gables, Florida. Patrick has worked in leadership, living collections management, herbarium curation, rare plant survey, floristic inventory, laboratory research, and land management for botanic gardens, universities, government, and private interests. If asked about his experience, Patrick would say he has “used most every botanic garden tool, from the shovel to the sequencer.”
When the DuPont family created what has since become one of America’s treasures—Longwood Gardens, in Kennett Square, Pennsylvania—they had little reason to be concerned for what the future might hold for this bucolic attraction.

Through prudent management and measured growth, Longwood Gardens has become a “destination attraction” for hundreds of thousands of visitors each year. The expansive setting plays host to formal receptions, concerts, fireworks, and more than its share of serious garden experts.

As Americans throughout the country are well settled into their summertime activities, we are reminded of the recent terrorist attacks in Paris and Brussels, and right here at home in San Bernardino, California, and Orlando, Florida. These attacks represent the asymmetric warfare conducted throughout the world, incited by extremists bent on disrupting the lives of those who represent freedom and democracy.

Since 9/11, law enforcement and emergency preparedness officials have been training and protecting our way of life. This task requires us to be on constant alert for those who would challenge our way of life. Each day we are reminded that “soft targets”—our malls, amusement parks, sports contests, and even public gardens—are now identified as easy target by our enemies.

We are reminded each day to be vigilant and to employ systems and techniques that were previously the domain of law enforcement. We now must develop a “situational awareness” of our surroundings, particularly when we think that “no one would dare attack defenseless people enjoying the outdoors.”
What does this mean nationwide for venues like Longwood Gardens? As these destinations become more popular, the potential for them to become a point of interest to those who would do us harm becomes more real.

This new normal requires attention to many more details than before. Gone are the days when a small security presence handled little more than an occasional disruption in a large crowd. Today PREVENTION and PROTECTION are constantly on the minds of these "soft targets." As the diversity of activities at these venues grows, so does the potential for bad things to happen. Where once a few event personnel could manage the flow of guests, today we need to be prepared for unlikely organized attacks, domestic disruption, and even the possibility of improvised explosives such as those used at the Boston Marathon. We can no longer be comfortable with the methods of the past. New steps must be taken to protect the way of life that we have known for centuries. How do we approach this challenge?

Enter Governor’s Office of Homeland Security (GOHS). Under the administration of Pennsylvania Governor Tom Wolf, GOHS has embarked on an aggressive campaign to assist venues and sponsors of mass gathering events to better prepare for the potential for adversarial and terrorist attacks. Through a series of Prevention and Protection Exercises (tabletop exercise (TTX) programs), GOHS assembles all the relevant agencies, organizations, and support groups to review their preparations for such events. Longwood was the first horticultural and multi-faceted organization in the Commonwealth to request a TTX. GOHS develops risk-based scenarios where vulnerabilities and capabilities are addressed. Over several hours federal, state, and local agencies address their capabilities to coordinate, cooperate, and share pertinent intelligence, all geared to raise levels of situational awareness.

These TTX programs are supported by the US Department of Homeland Security and the Pennsylvania State Police venue threat assessments. These visits, by either or both agencies, review specific areas of vulnerability and assess their risk against similar events or venues, both locally and nationwide.

The success of the Longwood Gardens TTX is an indication that these TTX programs have become a critical aspect of prevention and protection against unknown, but unfortunately all-too-common, attacks.

For more information on how to improve your approach to these risks, please contact Kristin Daniels, Outreach Coordinator for the Governor’s Office of Homeland Security at 717-346-4460 or kridaniels@pa.gov. Our office can assist residents from other states in locating their state’s homeland security office for further information. Or visit our website at homelandsecurity@pa.gov.

Ronald C. Stanko, Esq., was appointed Deputy Director of the Governor’s Office of Homeland Security in 2011. Prior to joining the office, Ron served in the Pennsylvania Office of Attorney General for twenty years as a Prosecutor in the Environmental Crimes Section, assigned to the US Attorney’s Office for the Eastern District as a cross-designated United States Attorney. In 1994 Ron was promoted to the rank of Chief Deputy Attorney General, a position responsible for the Intelligence Section of the Criminal Division. Ron also served as the Interim Director of the High Intensity Drug Trafficking Area of Philadelphia-Camden. He may be reached at rstanko@pa.gov.
KNOW YOUR RISK

Determine Major Threats at All Locations
- Disease/Insects
- Guests
- Vandalism/Theft

Key Risk Factors for Indoor Collections (Conservatories)
- Failure of Temperature Control Systems/Spoilage
- Building Collapse
- Fire

Key Risk Factors for Outdoor Collections
- Natural Disasters (What zone are you located in?)
- Vehicles/Accidents

Risk of Damage from Natural Hazards

The Hazard Risk Score (100 being highest) is based on exposure to multiple natural hazards including: flood, wildfire, tornado, storm surge, earthquake, straight line winds, hurricane winds, hail and sinkhole. Both the probability and frequency of the event are included in the score.

The cost and availability of insurance protection are impacted by the risk score as well. Insurance for Indoor Collections is available on an “All Risk” basis including spoilage. Insurance for Outdoor Collections is on a limited basis to a dollar amount per Tree/Plant. The named perils typically offered include fire, lightning, explosion, aircraft or vehicles.

Source: APGA

TOP 20
Number of Public Gardens per State

1. CA 48
2. NY 37
3. FL 36
4. PA 36
5. OH 23
6. VA 20
7. TX 18
8. IL 18
9. NC 17
10. GA 15
11. WA 15
12. WI 14
13. NJ 13
14. CO 13
15. MI 12
16. MA 11
17. MD 10
18. AZ 10
19. IA 9
20. DC 8

Source: APGA
Define the Collection
- Identify the plant categories and inventory the plants within each.
- Include the name, category (e.g., landscape, collection, exhibit), status (e.g., endangered) and suggested protection methods.
- Identify accredited collections and non-credited (NAPCC and/or AAM).
- Identify what to propagate and establish importance of each.

Plant Valuation
- The Guide for Plant Appraisal (9th edition) by the CTLA is the standard and is accepted by insurance companies.
- Important to include the cleanup and installation costs along with the guarantee as part of the valuation.
- Use the cost for the largest specimen available to replace the damaged tree as there is no way to possibly replace a large, accessioned tree.

Prepare
- Collaborate with sister institutions with similar climate zones
- Share plants and propagules
- Create reciprocity agreements
- Relocate collections to lower risk within your space
- Propagate replacements to increase landscape and collection populations
- Utilize seed banks

Preparedness Cycle:
Preparedness is how we change behavior to limit the impact of a disaster.
Plan: Identify, understand, preserve plants critical to your collection.
Organize: The process of creating a plan is far more beneficial than the actual plan.
Train: Engage all team members in the process.
Exercise: Test the plan regularly.
Evaluate: Consistent improvement in the plan is required as collections change.

Resources:
- Heritage Preservation Connecting to Collections. This document can be accessed at: www.connectingtocollections.org/resources/
THE HISTORY OF CRAPEMYRTLE CULTURE IN NORFOLK, VIRGINIA, HAD HUMBLE BEGINNINGS. BEFORE SUPERINTENDENT OF PARKS FREDERICK HEUTTE ARRIVED ON THE SCENE IN THE 1930S, NORFOLK’S PARK SYSTEM AND THOROUGHFARES LACKED ANY ORGANIZED BEAUTY. HEUTTE ESTABLISHED THE AMBITIOUS GOAL OF MAKING NORFOLK THE “CRAPEMYRTLE CAPITAL OF THE WORLD.” HE WOULD KNOCK ON HOMEOWNERS’ DOORS AND INVITE THEM TO JOIN IN PLANTING THE TREES ALONG THE CITY’S STREETS. NORFOLK’S BALLENTINE BOULEVARD BECAME JUST ONE OF MANY AVENUES LINED WITH COTTON-CANDY-PINK SUMMERTIME BLOOMS. EVENTUALLY, HEUTTE MET HIS GOAL, PLANTING OVER FORTY THOUSAND CRAPEMYRTLES IN NORFOLK, MANY OF WHICH FOUND THEIR WAY INTO THE CITY’S PARKS AND BECAME THE FOUNDATION OF NORFOLK BOTANICAL GARDEN’S (NBG) CRAPEMYRTLE COLLECTION. HEUTTE WENT ON TO BECOME NOT ONLY A FOUNDER BUT ALSO THE FIRST DIRECTOR OF NORFOLK BOTANICAL GARDEN.

IN 2013, NBG’S LAGERSTROEMIA COLLECTION OF 450 PLANTS, REPRESENTING EIGHTY-TWO VARIETIES, WAS ACCREDITED THROUGH THE PLANT COLLECTIONS NETWORK WHICH IS ADMINISTERED BY THE AMERICAN PUBLIC GARDENS ASSOCIATION. SO FAR, NBG HOLDS THE ONLY ACCREDITED COLLECTION OF CRAPEMYRTLES IN THE UNITED STATES, AND POSSIBLY THE WORLD.
NBG LAGERSTROEMIA COLLECTION HIGHLIGHTS

FLOWERING ARBORETUM:

• “Gone with the Wind” Stand: the story behind the ‘Ashley’, ‘Melanie’, ‘Rainbow’, and ‘Rhett Butler’ crapemyrtles is that they were planted in honor of Hubert and Louise Rash at a time when memorial trees were planted throughout the Flowering Arboretum. Louise used to manage a Tea House at NBG. It is unknown whether these trees (‘Ashley’, ‘Melanie’, and ‘Rhett Butler’) were officially named and introduced cultivars of the common crapemyrtle. There is a confirmed ‘Scarlett O’Hara’ cultivar but no records of the ‘Ashley’, ‘Melanie’, and ‘Rhett Butler’.


• The Flowering Arboretum contains the largest concentration of our collection. Lagerstroemia limii is found here and is represented as a Virginia State Champion Tree. This white-flowered species is the first to bloom.

MATSON BORDER GARDEN:

Lagerstroemia fauriei ‘Townhouse’ is our other Virginia State Champion Tree representing the genus Lagerstroemia.

WORLD OF WONDERS (WOW) CHILDREN’S GARDEN:

• The Garden has a few true-red crapemyrtles. We are growing the cultivar ‘Dynamite’ in the Children’s Garden and at the Garden’s entrance on Azalea Garden Road.

• The cultivar ‘Osage’ is planted along the side entrance to WOW. These shorter, bright-pink-flowered crapemyrtles have a very high level of disease resistance. The variety in front of WOW (near Exploration Station) is another National Arboretum introduction known as ‘Miami’.

Known as “100-day bloomers,” crapemyrtles, which can be red, purple, pink, or white, thrive in the full summer heat and sun, with blooms lasting from July into October. Even a few hours of shade may compromise flowering as can over-fertilization, a lack of heat, and frequent irrigation. The fruits that are produced are succulent green at first and about the size of a large pea. The exfoliating bark adds year-round texture and color interest to any landscape. Crapemyrtles do not grow well in the British Isles and similar areas, such as the Pacific Northwest, due to the absence of summer heat in those places. The common crapemyrtle can withstand mild winters in Zone 7, and the Japanese crapemyrtle can tolerate conditions in and below Zone 6.

In general, crapemyrtles do not need to be pruned. Pruning, if done, should be undertaken annually (February at NBG) only to remove dead, diseased, or damaged wood. In the eyes and hearts of horticulturists and purists, “crape murder,” or cutting the trees back to just large limbs, is the biggest crime committed against crapemyrtles. As a result of such pruning, fewer, larger flowers are produced, and the spindly stems, usually unable to support the larger flowers, can bend and break because of the added weight. No reason exists to top—or “crape murder”—this plant.

Crapemyrtles are one of the few “care-free” plants and, as a result, are widely used in the landscape industry. My career in horticulture has allowed me to live in Texas, Florida, and now Virginia. The one overwhelming plant constant in all those states is the crapemyrtle, but the best display of crapemyrtles is, in my opinion, right here in the Hampton Roads area at NBG...the same one started decades ago by our very own Frederick Huette. But don’t take my word for it; come and see for yourself!

Renee Frith is Curator of Woody Plants at NBG. Renee holds a BS in Horticulture from Auburn University and is an ISA Certified Arborist. She may be reached at renee.frith@nbgs.org.
Late summer is regarded by many as a “shoulder season,” a slower period between the craziness of spring and early summer and the hurriedness of fall. Such intervals provide ample opportunity for observation and reflection, and those who brave the heat and humidity are often rewarded with sights missed by the casual garden visitor. A patch of *Rudbeckia hirta* in a meadow at Canada’s Royal Botanical Gardens (site of next year’s American Public Gardens Association conference) rewarded visitors with these fasciated flowers.

Fasciation can be caused by genetic or bacterial issues, untimely damage by pests or adverse weather, or mechanical means. It always results in the disruption of the normal development of flowers or plant parts and creates “fascinating” abnormalities. Fasciated or “crested” cacti and succulents are highly sought after by collectors and professionals. Let’s face it, who DIDN’T photograph the crested saguaro at the American Public Gardens Association’s 2013 conference in Phoenix?

Now is your time to discover. Our gardens are marvelous places and provide a continual source of amazement and wonder. Ours is but to be there...with eyes and minds open.
So during the quiet days of late summer, I invite you to walk a garden—any garden—and “...reap the perpetual ‘harvest of a quiet eye...’” (Wm. Hamilton Gibson’s Sharp Eyes: A Rambler’s Calendar, 1898, https://babel.hathitrust.org/cgi/pt?id=hvd.hn68n1&view=1up;seq=9)

© Carlo A. Balistrieri
Carlo Balistrieri Photography / The Botanical Gardening Group
www.carlobalistrieri.com / www.botanicalgardening.com

Carlo Balistrieri Photography serves its clients’ fine art, editorial, and commercial image needs with photographs inspired by garden, botany, and horticulture.
The Botanical Gardening Group provides consulting services to public gardens needing assistance with management, collections/curation, horticulture, planning, design, communications, programming, event planning and management, new projects/restorations/preservation, and best practices.
TRAINING GROUNDS: HOW THE NEW YORK BOTANICAL GARDEN TEACHES TODAY’S HORTICULTURISTS

Jenifer Willis

Students in the School of Professional Horticulture replenish plantings in the Jane Watson Irwin Perennial Garden on their horticulture rotations.

photo: The New York Botanical Garden
Since its founding in 1891, The New York Botanical Garden (NYBG) has served as a beautiful oasis in a busy metropolis. The Garden is known for operating one of the world’s largest plant research and conservation programs—but it’s also a continuing education center, serving more than five thousand students annually.

It’s an ideal place to learn about plants, especially if you’re pursuing an education in horticulture from either of the Garden’s two programs: The School of Professional Horticulture (SoPH) or the Adult Education Horticulture Certificate Program. Both programs are academically rigorous, but the Certificate track offers a more flexible, part-time schedule, while the School of Professional Horticulture’s program is full-time for two years.

“SoPH is the only nationally accredited hands-on horticulture training program in the country,” said Director Charles M. Yurgalevitch, PhD. “Our graduates are proof of our quality. For the past six years, they have enjoyed a 100 percent job placement rate in the field.”

While at the School of Professional Horticulture, students spend one quarter of their time in academic courses taught by top horticulturists and botanists—the same experts who oversee the Garden’s world-renowned collections. During their first year, students rotate through four main areas of the Garden for specific, hands-on horticulture training; take part in plant walks where they learn to identify more than one thousand plants; participate in at least ten field trips per year; and maintain their own garden plots on NYBG grounds. In the second year, students acquire their training with a six-month internship outside the Garden. They graduate with a prestigious New York Botanical Garden Diploma in Horticulture.

Marc Wolf, who graduated this spring, came to the School as a career-changer. Though already an award-winning theatre, film, and TV writer and performer, he discovered a passion for plants and conservation that outweighed his existing career.

At the School of Professional Horticulture, Wolf had the chance to participate in a weeklong field study with renowned ecological landscape architect Darrel Morrison. Organized by Morrison and NYBG at Black Rock Forest Consortium, the field study focused on the botanic composition, aesthetic character, and ecological dynamics of native plant communities in the New York City region.

“Trips like these gave us an opportunity to engage with today’s top horticulturists and designers—working in formal gardens to rooftop farms,” Wolf said. “They rounded out the education we got in the School of Professional Horticulture.”

That experience, combined with NYBG’s lectures, symposia, plant preservation workshops with Herbarium staff, and native plant summits gave Wolf ample opportunities to supplement and enrich his hands-on training and coursework in horticulture, which led to an exciting job offer upon graduation.

Wolf recently was hired as Director of Horticulture at Mountain Top Arboretum in Tannersville, New York, a 179-acre mountain environment specializing in native and exotic trees and shrubs. Other recent graduates of the SoPH program have gone on to work for Dumbarton Oaks, The High Line, and the Chicago Botanic Garden, among other high-profile horticultural institutions.

Bijan Haghnegahdar considered the School of Professional Horticulture before opting for the more flexible Certificate program. Before coming to New York City, Haghnegahdar studied architecture at Southern California Institute of Architecture in Los Angeles.

“I was always interested in the overlap between architecture and landscape as embodied in the green roofs, walls, and courtyards of dense urban cities,” Haghnegahdar said. So, he took a job at a local landscape architecture firm and began studying horticulture at NYBG to learn more about the plants in the firm’s designs. He completed the Certificate Program in one year and continues to work at Neuhaus Design Architecture, where he uses his advanced technical skill-set to create innovative, sustainable designs. Eventually, he wants to start a multi-disciplinary architecture practice that integrates both landscape and architectural design.

“MY NYBG INSTRUCTORS WERE NOTHING SHORT OF FANTASTIC, OFTEN TEACHING THROUGH PERSONAL AND HANDS-ON EXPERIENCE THAT CAN’T BE FOUND IN TEXTBOOKS,” HAGHNEGAH DAR SAID. “I RECOMMEND THE PROGRAM FOR ANYONE INTERESTED IN GROWING PLANTS OR LOOKING TO TAKE THEIR CAREER IN A MORE REFRESHING DIRECTION.”

The Horticulture Certificate Program blends classroom theory with field studies on Garden grounds, teaching students how to create and care for healthy, sustainable landscapes. Landscape professionals, botanists, and practicing horticulturists design and teach courses across four areas of concentration: Plant Production, Sustainable Landscape Management, Arboriculture, and Sustainable Garden Design. Horticulture Certificate students complete between 158 and 218 classroom hours.

Like Haghnegahdar, Certificate Program alumni have found a wide variety of careers in the horticulture industry—nursery owner, parks and gardens crewmember at New York Restoration Project, professional horticulturist at Battery Park City Conservancy, and more.

“The field of horticulture has only grown in importance, as conservation becomes a bigger issue worldwide,” Barbara Corcoran, Vice President of Continuing and Public Education at the Garden, said. “Our goal is to educate and equip graduates with the training they need to create beautiful and sustainable gardens and landscapes. What they do with that training is limitless.”

Additional information about The New York Botanical Garden’s School of Professional Horticulture can be found at www.nybg.org/edu/soph.
Information about the Horticulture Certificate Program can be found at www.nybg.org/adulted.

Jenifer Willis is the former Marketing Coordinator at The New York Botanical Garden.
“I am excited to see the beautiful brochures that the two students designed for Beijing Botanical Garden,” wrote Dr. Zhao Shi Wei, Director of the Beijing Botanical Garden since 2010, when he received two brochure designs in English to welcome international visitors to his garden.

“We will put these brochures to immediate use at the San Francisco Conservatory of Flowers,” wrote Jane Scurich, Director of Administration at the Conservatory, in her handwritten note. Jane had just received a packet of brochures in print and in soft copy, in Mandarin, Vietnamese, Mongolian, and Ukrainian.

Pre-MBA students—all international students intent on obtaining MBAs from California State University East Bay to further their careers—enjoyed a field trip to the Conservatory as well as the University of California Berkeley Botanical Garden. For each location, they created a brochure in their home language. For their final assignment, they were tasked with writing a visitors brochure for a garden in their home country in English, after gathering information on the Web.

That is how the 300Gardens Project was born. Its goal is to provide three hundred under-resourced gardens with international visitor brochures before December 31, 2021. Ideally, the soft-copy brochure assignments are handed in using .doc or .ppt formats. The brochures—genuine seeds of hope—are then “planted” at the gardens for which they were created, and just like in real gardens, serendipity takes care of the rest. Thus far, we’ve had a successful “crop”!

The brochures created by the students elicit excitement from everyone who sees them. When Abby Hird Meyer, Program Manager at Botanic Garden Conservation International US (BGCI US), first saw the brochures, she was immediately drawn to the contents, which, she says, will fill in gaps in BGCI’s garden database. The BGCI China office will hand over the soft-copy brochures to the marketing or educational manager at each of the gardens in China, Mongolia, and Vietnam.

Currently, nearly one million foreign students on F1 visas are enrolled at colleges across the US. They often begin their studies with non-credit, intensive English-language programs at community colleges or state universities. In addition, English as a Second Language (ESL) is offered at many county adult education schools all over the country. These are all places where English learners can engage in writing botanical garden brochures in their home language.

Ample pedagogical literature suggests that students produce higher quality work when engaged in real-world
projects that help solve real-world problems. Students can earn service learning credits, too, if their colleges have such a requirement.

Creating brochures is a two-step process. First, students learn what needs to be included (i.e., understanding the audience, the competitive landscape, and the compelling attributes of a particular garden) and how to go about the writing assignment (i.e., include direct and factual information, some persuasive sentences, and lots of photos). After mastering these concepts, the students then write and design a brochure for a US garden in their native language.

The second assignment is to use their newly acquired skills to develop a brochure in English for a garden in their home country. Since the students have already learned the digital tools for making an attractive brochure, the English content takes precedence.

So how do we get from twenty gardens to three hundred gardens? By having more ESL teachers engage students in similar practical writing assignments. If ten teachers use our course materials for thirty students over the next five years, we will meet our goal of providing three hundred gardens with brochures.

You can partner with ESL teachers of advanced English in your city to help us meet this goal. Invite them and their students into your garden for a tour. For business English classes, emphasize ways revenue is generated—for example, through lecture attendance or gift shop purchases. For academic English or advanced writing students, you can help them understand how brochures help potential visitors: they can draw in children and parents, young adults on a date, garden enthusiasts of all ages, and anyone who wants to spend a day in fresh air. Emphasize the message that rare species are endangered everywhere on the planet and that they can contribute to the cause of plant conservation by attracting the attention of international visitors to their hometown botanical gardens.

These forays into gardens will enhance the American experience of international students. Once introduced to the beauty of your garden’s diverse and location-specific plant life as well as that of the gardens in their homeland, perhaps they will become perpetual visitors to public gardens wherever their future travels take them. The results of the 300Gardens Project could be far-reaching and one more way to make public gardens indispensable.

www.publicgardens.org/content/currentpublicgarden

Deborah Grove serves on the advisory board of the San Francisco Conservatory of Flowers and teaches college-level ESL. She previously worked as a communication strategies consultant in Silicon Valley’s startup community. She has visited gardens in forty-five countries and knows first-hand how few materials are available to international visitors. To learn more about the syllabus for the 300Gardens Project and how to partner with your local colleges and universities, contact her at dg@debgrove.com.
LONGHOUSE RESERVE IS A PLACE FOR PASSION, A HOME FOR INNOVATION, AND AN ENVIRONMENT FOR CREATIVITY, WHERE ART AND NATURE LIVE SIDE BY SIDE IN HARMONY.

OVER THE LAST TWENTY-FIVE YEARS, THE EAST HAMPTON GARDEN AND OUTDOOR ART GALLERY HAS EBBED, FLOWED, AND EVOLVED UNDER THE PUBLIC’S CURIOUS EYE, DESPITE THE RESERVE’S ORIGINAL AND, CURRENTLY, SIMULTANEOUS FUNCTION AS A PRIVATE RESIDENCE FOR FOUNDER JACK LENOR LARSEN.
“I built LongHouse to share as a case study because I feel being in a space is more rewarding than even fine photography,” eighty-nine-year-old Larsen said. “Rarely do I sense a conflict with LongHouse also being my residence.”

Seven new sculptures are on display this season: Neil Noland’s repurposed oil tank Green RE: Genesis/Lake Eden/Black Mountain; The Invisible, a life-sized figure slightly immersed in water, by Enrique Martinez Celaya; Untitled, by Jun Kaneko, a series of four ten-foot-tall and one twelve-foot-tall ceramic totems; the original Larry Rivers Legs; George Rickey’s 6 Lines in a T II, and Ilya and Emilia Kabkov’s Arch of Life. These are added to well-known installations of de Kooning’s, Yoko Ono’s Play It by Trust chess set, glass works by Dale Chihuly, and the soaring Sol LeWitt sculpture Irregular Progression High #7.

“The garden’s changed and matured. We continued and expanded this program of art in the garden because that is really what, I feel, makes it interesting and makes it worthwhile for people to come back,” executive director Tomicic said.

The garden Larsen planted at LongHouse in 1986 looks like child’s play compared to the vision that exists today, after a decade of work by arborist Ray Smith, President of Ray Smith and Associates, who has “touched every single tree,” according to Tomicic.

“I didn’t know what LongHouse was. I just saw a sign and this allée of cryptomeria, which were in very bad shape. And I said, ‘Wow, they need some help,’” Smith said with a chuckle. “I went up front, found an office, and told them what was wrong with the cryptomeria, and they asked me if I would be interested in taking it on—the plant health care—and I said, ‘Sure!’ That was my biggest challenge coming into it.”

“We’re adding plants all the time, every year. The place constantly changes. It’s really all Jack,” Smith said. “You can’t possibly see this place on one visit; you have to come back several times during the growing season to really appreciate the types of plants we have, the different flowers and colors that Jack puts together. And he’s tireless.

For a man his age, he’s just on the go all the time, and he’s got new ideas all the time. And we try to make them work.

That’s our job.”

Michelle Trauring is a writer for The Southampton and East Hampton Press. This article is an abbreviated version of one she wrote for that publication.
THINGS WE LOVE THIS SUMMER

DOUBLE DELIGHT

Though Hydrangea quercifolia ‘Brido’ Snowflake™ is not new to the trade, its prolific double sepals still stop us in our tracks. After the sepals have given us roughly eight weeks of creamy white and then pink color, the leaves end the summer with a nice, deep red, and keep us coming back to get another look at this remarkable shrub.

Submitted by Sara Helm Wallace, Living Collections Manager, and Kristin McCullin, Horticulturist, Allen C. Haskell Public Gardens

PLANTING IN A POST-WILD WORLD

With stunning design and illustrations, Planting in a Post Wild World holds a refreshing new perspective on designing plant communities based on their ecology and life history instead of individual aesthetics. Whether you’re an emerging professional or a seasoned horticulturalist, this book holds a number of lessons (and reminders!) we can all benefit from. You may even recognize a number of public gardens featured in the photographs!

Submitted by Andy Sell, University of Michigan

COOL JAZZ, WARM NIGHTS

Opening the Allen C. Haskell Public Gardens to a sunset jazz concert was a highlight of our summer season. On a warm August evening, friends and family picnicked in the six-acre garden, where the green of the summer trees provided a perfect stage for the cool jazz of Armstead Christian.

Submitted by Sara Helm Wallace, Living Collections Manager, and Kristin McCullin, Horticulturist, Allen C. Haskell Public Gardens
Our primary goal with our #givingtuesday campaign was to remind our social media followers and Duke University alumni at a time of holiday giving that half of Duke Gardens’ operating budget comes from its generous members and donors. To that end, it was a success, driving traffic to our website’s “support us” page and earning a few new memberships.

In addition to paid Facebook ads (see below), I also posted our Facebook ads (see below) to Twitter and Instagram, and directly to our Facebook feed without any paid boosting. Our un-boosted Facebook posts got roughly the same number of exposures as the ads did, but with our existing Facebook followers, they received more likes, comments, and shares. Each avenue has its own strengths, and they work nicely in tandem.

Our only cost, outside of a minimal Facebook ad fee, was for a small amount of in-house design time. I like to keep these and other donor-focused ads simple and subtle, seeking to create an image that people will be inclined to “like” and share regardless of whether the embedded message is important to them. Each exposure is a seed planted, whether it sprouts immediately or later on.

With so many charities chasing #givingtuesday dollars, we may opt to pull back on the paid ads this year, so as not to get lost in an ever-growing morass of donation pleas. But we will definitely participate in some form, and I would encourage other public gardens to do the same. Why not take advantage of this low-cost opportunity to reach future public garden supporters?

Orla Swift is the Director of Marketing and Communications at Sarah P. Duke Gardens. She can be reached at orla.swift@duke.edu.

To learn more about #givingTuesday and how you can participate, please see www.givingtuesday.org.
1, 4, 8, 13, and 16. Guests enjoyed both the ambiance of Vizcaya and entertainment by Adora.

2, 11, 18, and 19. Attendees at various events throughout the conference space - opening reception, sessions, poster presentations.

3. Cynthia Druckenbrod received the Professional Citation Award from Executive Director Casey Sclar and Awards Committee Chair Catherine Hubbard.

5. Richard W. Light and Sally Lighty, recipients of the Association Service Award, enjoyed the hospitality of Vizcaya.

6. Chipper Wichman received the Award of Merit.

7. Richard V. Piaentini accepted the Operational Sustainability Award on behalf of Phipps Conservatory and Botanical Gardens.
9 and 10. Evelyn Gaiser presented at the Keynote Breakfast on Thursday morning.

12. Directors and guests enjoyed an evening at Kampong, National Tropical Botanical Garden.

15. Jane O. Macleod (President & CEO of Cheekwood Botanical Garden and Museum of Art and Association Board Member) and Sharon Van Loon (Insurance and Risk Management Consultant at Berends Hendricks Stuit and Association Board Member)

14 and 17. ChemArt, GWWO Inc., and Lantern Fest Creative – Lantern Festivals, Holiday Lighting, and Ramses Wissa Wassef Tapestries were some of more than thirty exhibitors in the Exhibit Hall.
TELL US ABOUT YOUR JOURNEY IN THE GARDEN INDUSTRY. HOW DID YOU BECOME A “TREEOLOGIST”?

My interest in the natural world started out when I was a kid—I loved being outdoors, and my parents encouraged me to explore and get my hands dirty. I was always fascinated by how people can use plants for food and medicine. It seemed so amazing that you could be walking through the woods and eat something that was growing there. Fast forward several years, and I actually end up writing my doctoral dissertation (at West Virginia University) on American ginseng—its role in the Appalachian culture as a medicinal plant, how it can be sustained, and how it plays a role in forest ecosystems.

A turning point for me came when I became the Botany in Action Fellow at Phipps Conservatory in Pittsburgh. I went through an intense outreach bootcamp that challenged me to make my research accessible to all kinds of audiences through all kinds of media. When this groundbreaking job opened up at The Morton Arboretum, I knew it was perfect for me and the direction I wanted for my career.

WHAT DOES A TREEOLOGIST DO? WHAT PROJECTS ARE YOU INVOLVED WITH?

As the Treeologist at The Morton Arboretum, I take all the great science that’s going on here and elsewhere in the world and make it accessible through different communication channels. I work at the intersection of several departments—research, education, and communications—and try to bring a better understanding about trees and ecology to the public. One of my recent projects was establishing a STEM field trip day to expose inner-city kids to opportunities in science and tree science careers. We’ve also been working on a “Treeologist” video series for the Arboretum’s YouTube channel. Education is the key to getting people engaged with science and helping them understand the impact they can have on the natural world.

WHAT DO YOU FIND MOST REWARDING THING ABOUT WORKING IN THIS INDUSTRY?

I love the diversity—of people, of projects, and of plants—that I get to deal with on a daily basis. Every day I learn something new. I am surrounded by talented people with exciting projects, and we all have the common goal of making the world a greener and better place.

Arboreta and botanic gardens are doing amazing research, and it needs to get out to the public so they can learn from and understand it. I’m excited to be a part of a field that is constantly finding innovative ways of making science accessible through education and communication.

Nominated by Carissa Kowalski Dougherty, Head of Knowledge Management, The Morton Arboretum
2017 Annual Conference
CALL FOR SESSIONS
Proposals due October 12, 2016
Visit www.publicgardens.org for details!

June 19-23, 2017
Host Gardens: NIAGARA PARKS COMMISSION & ROYAL BOTANICAL GARDENS

studioOutside

Working with Botanical Gardens for 15 Years

A.R. & Marylouise Tandy Floral Terraces
Tulsa Botanic Garden - Tulsa, Oklahoma
Master Planning and Garden Design
214 954 7160     www.studiooutside.us
Timeless designs built to last.

COUNTRY CASUAL TEAK

Durable site furnishings. CountryCasualTeak.com
Public Garden Leadership Fellows Program

Take your career to the next level!
Enroll in Cornell University’s one-year Public Garden Leadership Fellows master’s degree program.

Visit
cornellplantations.org/PGL

“Paper Navigator” installation in the Pacific Island Water Garden at the Franklin Park Conservatory and Botanical Gardens in Columbus, Ohio. Polynesian people traveled in small boats across vast seas carrying the plants and seeds they needed to prosper on small islands. One of the plants that was introduced to Hawaii by the Polynesians was Wauka, also known as the paper mulberry tree. Hawaiians continue to use the inner bark of this tree to make Kapa, or bark cloth, into wearable garments.

“For me, the paper boat captures the great adventure and courage that took place on such fragile terms within the vastness of the sea.” - Kevin Box
Advertise with us and see how Public Garden can help you grow.

“ZimSculpt had an incredibly successful run at Daniel Stowe Botanical Gardens. In fact, it was so well received it was brought back by popular demand! The sculpture was beautifully displayed in the Gardens as if they were meant to be there all along.”

Jim Hoffman, Director of Marketing & Communications, Daniel Stowe Botanical Garden, Dilworth, NC

For more information about this amazing exhibition opportunity contact:
Curators Vivienne or Joseph Croisette vivienne@zimsculpt.com

Please check our current and past exhibitions for press coverage, photos and more at ZimSculpt.com.

ZimSculpt
Curators of Zimbabwean Sculpture Worldwide

Request a media kit from PublicGardenMag@publicgardens.org

American Public Gardens Association
PublicGardens.org

MISSION: POSSIBLE

THEIR MISSION:
Connect More People With Your Garden
By enhancing the garden visitor’s experience

www.ribbitexhibit.com
Longwood Gardens, one of the great gardens of the world, has been developing leaders since 1967 and our commitment to building capacity and talent within public horticulture remains. Introducing our new Fellows Program. Our 13-month, fully funded, cohort-based residency program immerses Fellows in relevant topics such as leadership, board relations and governance, communications, change management, innovation, and talent management.

Applications and nominations due November 1, 2016. To learn more, visit: longwoodgardens.org/education/longwood-fellows